

CLAIMS

1. A printer for printing, preferably by thermal transfer, of articles (20) such as cards, in particular of plastic material, of the type comprising, from upstream to downstream, a loader (1) for articles to be printed, adapted to coact with a drive element for emitting articles (20) from the loader (1), a printing device (2) and transfer means (3) to bring sequentially the articles (20) from the outlet (18) of the loader (1) to the printing device (2) and from the printing device (2) toward collection means for the printed articles (20),

characterized in that the drive element for bringing articles (20) from the loader (1), constituted by a cylinder (4) in contact with the articles (20) to be treated by means of an opening (5) provided in a wall of the loader (1), is driven by a motor (6) common to the transfer means (3), the contact between the cylinder (4) of the loader (1) and the articles (20) to be treated being sequentially interrupted by an isolating device (7) actuated by a mechanical connection (8) with the motor (9) of the printing device (2).

2. A printer according to claim 1,

characterized in that the loader (1) comprises return means (10), preferably resilient, for the articles (20)

to be printed in the direction of the opening (5) of the
loader (1) to bring them into bearing contact with the drive
cylinder (4) of said loader (1), the isolating device (7)
comprising means (11A, 11B) bearing sequentially against said
articles (20) to move them against the return means (10) so as
to prevent any contact between the articles (20) and the drive
cylinder (4) of the loader (1).

3. A printer according to one of claims 1 and 2,
characterized in that the isolating device (7) is
comprised by a cage (11) partially enveloping the drive
cylinder (4) of the loader (1) by means of a discontinuous
peripheral wall, this cage (11) being adapted to occupy at
least one first angular position, called an active position,
in which at least one portion of the wall isolates the
articles to be printed from the drive cylinder (4) of the
rotor (1) turning freely and at least one second angular
position, a so-called inactive position, in which the wall
retracts to permit contact between the article and the
cylinder (4), the angular movements of this cage (11) being
controlled by a motor (9) common to the printing device (2).

4. A printer according to claim 3,
characterized in that the discontinuous peripheral
wall of the cage is shaped to delimit at least two bars (11A,
11B), at least one of said bars (11A, 11B) being adapted, in
a first active angular position of the cage, to isolate the
articles (20) to be printed from the drive cylinder (4) of the

loader (1) turning freely within the cage (11) and, in a second inactive angular position of the cage, to retract to permit, in the space between the bars (11A, 11B), a contact of the article (11) with the cylinder (4).

5. A printer according to one of claims 3 and 4, characterized in that the printing device (2) is constituted by at least one shaft (2A) with cams (2C) on which bears a printing head (2B) driven with up and down movement upon angular displacement of said shaft (2A) to move between an upper inactive position and a lower active position, the angular movement of said shaft (2A) being synchronized with the angular displacement of the cage (11) so as to define at least two positions, a so-called loading position in which the printing head (2B) and the cage (11) are in inactive position and a fresh article (20) is driven from the loader, and the other, so-called printing position, in which the printing head (2B) and the cage (11) are in an active position to avoid any driving of a fresh article during the printing process.

6. A printer according to claim 5, characterized in that the cage (11) and the shaft (2A) with cams (2C) occupy at least a third position intermediate between the first and second positions, in which the cage (11) is in active position whilst the printing head (2B) is in inactive position.

7. A printer according to one of claims 1 to 6,
characterized in that the isolating device (7) is
mounted by snapping into the shaft of the cylinder (4) of the
loader (1).

8. A printer according to one of claims 1 to 7,
characterized in that the isolating device (7)
constituted by a cage (11) partially enveloping the drive
cylinder (4) of the loader (1), is connected to the motor (9)
of the printing device (2) by a mechanical connection (8)
constituted by a crank type device comprising a rotatable
flywheel (13) connected to the motor (9) by a reducing
mechanism (14), this flywheel (13) with an eccentric crank pin
(15) receiving a rod (16) connected to the cage (11) by a
crank arm (17) so as to give rise, during actuation of the
motor (9), to an angular movement of the cage (11).

9. A printer according to claim 8,
characterized in that at least a portion of the
reducing mechanism (14) disposed between the crank and the
motor (9) of the printing device (2), is common to the drive
mechanism (12) of the printing device (2).

10. A printer according to one of claims 1 to 9,
characterized in that the motor (9) of the printing
device (2) is reversible in direction of rotation.